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Fall 2004



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Partnership renewed



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Watershed Watch Network Training Volunteer monitors get to know their "bugs"



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In Memory Remembering Jack Stewart



Watershed Educators Conference Set for June 28 & 29 Mark your calendars

Governor McGreevey Enacts Historic Highlands Legislation Protects Drinking Water for 5.4 Million New Jersey Residents

In August, Governor James E. McGreevey signed historic legislation that preserves nearly 400,000 acres of environmentally sensitive land in New Jersey's Highlands region and protects the source of clean drinking water for 5.4 million New Jersey residents.

"The Highlands region has long been one of the missing jewels in this country's and our state's preservation efforts," McGreevey said. "No longer. By signing the Highlands Act today, we are keeping our commitment to New Jersey families and ensuring clean drinking water for our children."

Senator Bob Smith, co-sponsor of the Act, said he has long recognized the need to protect the Highlands. "For some, the fight to protect the New Jersey Highlands has gone on for decades," said Smith, Chairman of the Senate Environment Committee. "For others, it has only felt like it took that long, despite objections by opponents that it was 'rushed through the legislative process.' In any event, through careful deliberation and measured response, we've come up with a bill that will be celebrated in New Jersey as one of the biggest environmental accomplishments in decades."

(HIGHLANDS LEGISLATION continued on page 2)



The Native Plant Society of New Jersey will be working with schools to add rain gardens that feature native plants such as this Mountain Laurel. For more information, see page 10.

watershed focus

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Highlands Legislation

(continued from page 1)

Sixty-four percent of New Jersey residents, about 5.4 million people, receive their water from the Highlands. Those residents live in 292 municipalities, in 16 counties. And they include 900,000 people in urban areas such as Newark and Jersey City.

The New Jersey Highlands is a 1,000 square mile area in the Northwest part of the State, stretching from Phillipsburg in the Southwest to Ringwood in the Northeast. It lies within portions of seven counties (Hunterdon, Somerset, Sussex, Warren, Morris, Passaic and Bergen) and 87 municipalities.

Between 1995 and 2000, sprawl consumed 25,000 acres of forests and farmlands in the Highlands. Population growth is increasing in the Highlands at a rate of nearly 50 percent faster than the statewide rate.

The Highlands Water Protection and Planning Act designates a preservation area of 400,000 acres where development will be significantly curtailed. The Act heightens environmental standards to protect this area, which includes the region's most environmentally sensitive land, and establishes the Highlands Water Protection and Planning Council. The Council will work with local officials to prepare a master plan for the entire Highlands region, including both the preservation and planning areas, by February 2006.

Information about the Highlands Act and answers to frequently asked questions are available at www.nj.gov/dep/highlands/, a Department of Environmental Protection website.



what's a watershed?

A watershed is the area of land that drains into a body of water such as a river, lake, stream or bay. It is separated from other systems by high points in the area such as hills or slopes. It includes not only the waterway itself but also the entire land area that drains to it. For example, the watershed of a lake would include not only the streams entering the lake but also the land area that drains into those streams and eventually the lake. Drainage basins generally refer to large watersheds that encompass the watersheds of many smaller rivers and streams.



Wildlife Corps volunteer Jack Stewart helping kids with their fishing equipment during the Urban Fishing Program. Read more about Jack's legacy on page 11.

A Renewed Partnership for the Delaware Estuary



The Delaware Estuary Program (DELEP), one of 28 National Estuary Programs in the country, has reorganized in an effort to strengthen the connection between the Federal, State and public efforts to protect, restore, and enhance the estuary's natural resources. The new structure optimizes the effectiveness of the program and streamline the current organization by consolidating the two offices which currently comprise the program: the DELEP Program Office, formerly housed at the Delaware River Basin Commission (DRBC) in West Trenton, NJ; and the Partnership for the Delaware Estuary ("Partnership"), located in Wilmington, DE. This combined program office will be located in Wilmington and will maintain the Partnership's name. This reorganization became effective on October 1, 2004.

Kathy Klein, the Executive Director of the Partnership, a non-profit organization, which originally focused on community outreach and education activities for DELEP, is expanding her role to include oversight of the implementation of priority activities identified in DELEP's Comprehensive Conservation Management Plan (CCMP). The CCMP outlines a long-term vision of the Estuary and identifies specific goals and activities to support the goals of the program. DRBC, which has played a critical role in the coordination of scientific investigations, monitoring, data evaluation and research issues in the estuary, will continue in this lead scientific role. A new Estuary Science Coordinator position, housed within the DRBC offices, is also being established.

The Delaware Estuary extends approximately 133 miles from Trenton, NJ, to the mouth of Delaware Bay and covers portions of Pennsylvania, New Jersey and Delaware. DELEP partners who signed on to the CCMP include: the states of Delaware, New Jersey and Pennsylvania; the Delaware River Basin Commission; U.S. EPA Regions II and III. Other partners include the U.S. Fish and Wildlife Service; the National Park Service; U.S. Geological Service; the National Fish and Wildlife Foundation; the Philadelphia Water Department; and various public, private and for profit organizations, as well as, individual citizens.

DELEP receives approximately \$500,000 annually in Federal funding authorized under Section 320 of the Clean Water Act and administered by the U.S. Environmental Protection Agency (EPA). These funds must be matched by other non-federal contributions. Funding support provided by DELEP's public and private partners enable it to advance the implementation of the priority actions identified in the CCMP in order to meet its vision.

The Partnership is confident that this reorganization will reinforce the commitment of the existing partners, as well as inspire new partners to share the responsibility of protecting this vital natural resource and to help realize its vision for the estuary.

In 1988, the Delaware was among the first of the country's 28 estuaries to be nominated as an estuary of national significance and accepted into the National Estuary Program under the authority of Section 320 of the 1987 amendments to the Clean Water Act. A Management Conference consisting of representatives from many federal, state, and local governments; academia; non-profit and private organizations; and citizens convened to develop the CCMP, which was completed in 1996. This CCMP proposed a 25-year vision for the estuary and outlined specific priority actions that provide direction for efforts to protect and enhance the Delaware Estuary today.

To find out more about the Delaware Estuary Program or the Partnership for the Delaware Estuary go to www.delawareestuary.org or call the Partnership Office at 1-800-445-4935.

AmeriCorps Members Conduct Nonpoint Source Pollution Control Project Assessments

by Alyse Greenberg, NJ Department of Environmental Protection

In the last decade, hundreds of nonpoint source pollution control implementation projects were constructed by the various environmental organizations, government agencies and other entities throughout the State of New Jersey. Now, years after the completion of these initial efforts, it's important for us to keep these projects in sight so that we are more able to assess accurately what we have accomplished over the years and learn from our past labors to progress New Jersey's nonpoint pollution management strategies.

Since 1994, the New Jersey Nonpoint Source Program's (NPS) Section 319(h) Grant Program has been an integral component in nonpoint source management. Beginning in that year, the 319(h) Program began funding various types of nonpoint source pollution control projects ranging from the establishment of riparian buffers around waterbodies to detention basin retrofits to boat paint and oil entrapment programs. Part of the New Jersey Watershed Ambassador's charge is to conduct physical and biological assessments on the waterways of their particular watershed management areas. This past year, they specifically targeted 319(h) projects that were conducted on, or designed to affect, the waterbodies in their watersheds.

AmeriCorps members with the New Jersey Watershed Ambassadors Program, hosted by DEP's Division of Watershed Management, have now been conducting follow-up field visits to the sites of restoration projects funded through the 319(h) Program through an entire service cycle. During the 2003-2004 AmeriCorps term, Ambassadors visited 319(h) restoration project sites statewide and performed post-restoration physical surveys to assess the condition and continuing functionality of these sites. Their work at the preliminary sites selected for the past season has already proven invaluable in assisting the 319(h) Program in evaluating the effectiveness of restoration measures installed over the years.

In preparation for their field visits, the Watershed Ambassadors familiarized themselves with the details of each particular project by reviewing the scope of work that was funded by the 319(h) Program and studying the geographic and hydrologic characteristics of the site through GIS maps provided by the NPS Program. The Ambassadors then performed assessments at each of the nonpoint source pollution control sites and submitted their packages to the 319(h) Program to be utilized.

Cooperative efforts between the 319(h) Program and the Watershed Ambassador Program have been extremely successful in the past membership cycle and will continue to evolve in future membership cycles. The 2004-2005 Ambassador team will not only maintain the preliminary 319(h) sites assessed by their predecessors, but will expand their assessments to cover additional completed sites as well as begin investigations of potential sites for future projects. The Nonpoint Source Program is extremely pleased with the outstanding results produced in the original assessments and looks forward to the continuing success of their partnership with the New Jersey Watershed Ambassadors Program in years to come.





Watershed Watch Network Hosts EPA Rapid Bioassessment Training Events

The Watershed Watch Network Council (WWNC), a group acting as an umbrella for all of the volunteer water monitoring programs within New Jersey, hosted two training events in September on the latest methodology for taking freshwater stream samples. Titled the "EPA Rapid Bioassessment Protocol 3," this procedure is the most up-to-date iteration of the accepted practice for collecting and analyzing benthic macroinvertebrates: those little "bugs" that live under rocks, beneath the detritus and within the water columns of streams throughout our state.

These organisms are known to be reliable indicators of water quality; in many cases, they are deemed more accurate than a "snapshot" chemical assessment because they reflect the health of the ecosystem over time. Program coordinators and volunteers from across the state turned out to fill both sessions: the first designed for high gradient or "rocky bottom" streams and the second for low gradient or "muddy bottom" streams.

Rocky bottomed streams are those more commonly associated with the northern part of the state. For that reason, this training event was held at Prescott Brook, a small tributary to the South Branch of the Raritan that runs past the headquarters of the South Branch Watershed Association, the WWNC member that hosted this specific training. The

following day's muddy bottomed stream of choice was the Pompeston Creek, where it runs through Moorestown, home of the Pompeston Creek Watershed Association - that event's WWNC host member.

Despite two wet and overcast days, both sessions were filled to capacity. Many attendees turned out to get their feet wet with Jim Kurtenbach, an aquatic biologist with USEPA Region II and an increasingly popular guest instructor. With his encyclopedic knowledge of the subject, Jim very ably demonstrated the protocol and helped all of those in attendance to understand nuances such as regional modifications for their individual surveys. Attendees left with a practical technical reference for conducting cost-effective biological assessments in their own watersheds.

These events are the latest in an ongoing series of trainings, published guidance and other programs that are helping to move the WWN towards fulfilling its mission: "to foster and develop a sense of stewardship toward local waters that serves to remind or give warning of the health of the watershed."

For more information about the council and volunteer monitoring in New Jersey, visit www.nj.gov/dep/watershedmgt/volunteer_monitoring.htm

New Jersey Watershed Ambassadors Ready To Serve Their Watershed Communities

Are you interested in learning about volunteer monitoring techniques? Are you looking for an exciting environmental presentation for your classroom or community group? Do you want to know more about your watershed? The New Jersey Watershed Ambassadors Program can help you.

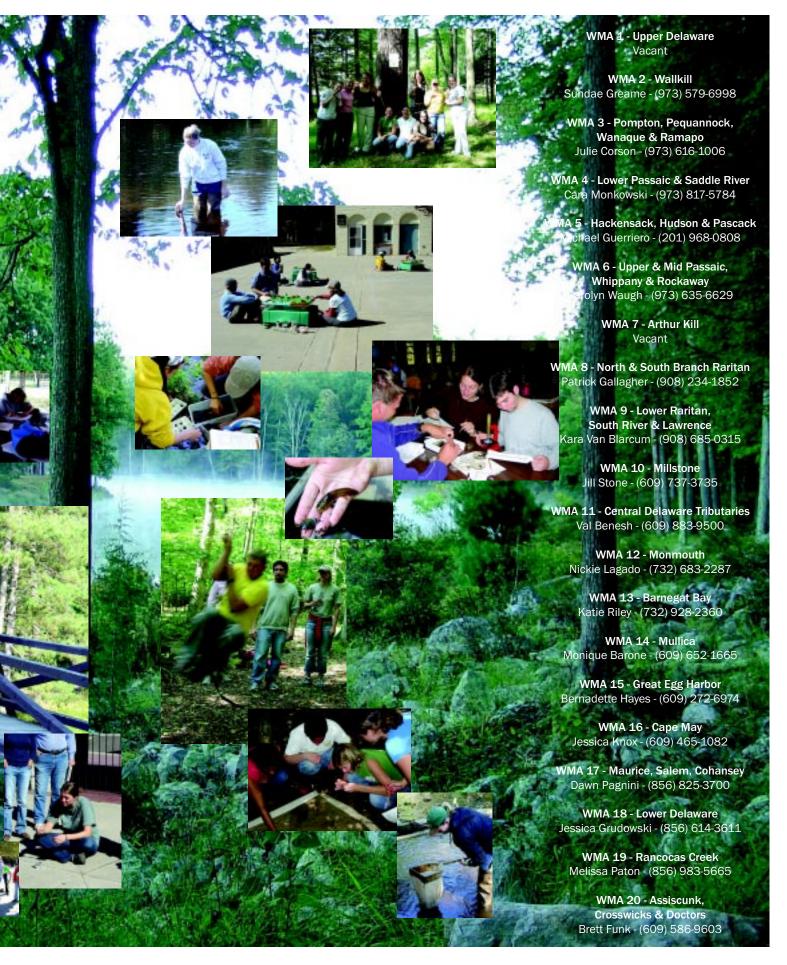
The New Jersey Watershed Ambassadors Program is a community-oriented AmeriCorps program hosted by the DEP's Division of Watershed Management since September 2000. Through this program, AmeriCorps members undergo two weeks of intensive training in volunteer monitoring techniques, watershed issues and presentation skills. Then the members are placed in watershed management areas across the state, ready to serve their watershed communities.

Watershed Ambassadors monitor the rivers of New Jersey through Visual Assessment and Biological Assessment protocols. The members also train community volunteers in these two volunteer monitoring techniques. Members are available to make presentations to community organizations and schools, which provide information about water and watershed issues in New Jersey.

Created in 1993, AmeriCorps is a network of national service programs that engage more than 50,000 Americans each year in intensive service to meet critical needs in education, public safety, health and the environment. AmeriCorps members serve through more than 2,100 non-profits, public agencies, and faith-based organizations. They tutor and mentor youth, build affordable housing, teach computer skills, clean parks and streams, run after-school programs, and help communities respond to disasters.

To schedule a presentation, please contact the New Jersey Watershed Ambassador for your area. For more information about the program, contact Michele Ruggerio, Program Manager at 609-292-2113.





Monmouth County Installs New Batch of Stream and Watershed Identification Signs

by Harriet Honigfeld, Monmouth County Planning Board



To increase public awareness and concern for New Jersey's waterways, the Monmouth County Planning Board and Monmouth County Environmental Council have completed the second phase of their Stream and Watershed Identification Project. Thirty-one sets of the blue, white and black signs were installed this spring in the Navesink River, Raritan Bay, Sandy Hook Bay, and Shrewsbury watersheds.

In 2003, the Monmouth County Planning Board received a \$5,000 grant from the NY/NJ Harbor Estuary Program to expand its stream and watershed identification project. As a result, signs were installed at select locations in the Bayshore, North Coast and Navesink regions of the county. The signs denote the name of the tributary crossed and the watershed in which it is located. The streams and rivers in this part of the county include the Navesink River, Swimming River, Shrewsbury River, Matawan Creek, Ramanessin Brook and Oceanport Creek. All ultimately drain to the New York/New Jersey Harbor Estuary.

"The identification signs are a great way to provide geographic information to local residents and our county's many tourists and visitors," said Joseph Rettagliata, Chairman of the Monmouth County Planning Board.

"Monmouth County has many beautiful waterways. These signs help increase public interest in the environmental and social significance of our streams, rivers and watersheds," added Harry Larrison, Director of the Monmouth County Board of Chosen Freeholders.

The signs were placed at county-owned bridges. There are over 300 such crossings in Monmouth County. In the future, the Planning Board hopes to secure additional funds to sign the remainder of the bridges and to partner with local municipalities.

The county first initiated the project in 1999 by preparing a study of potential sign designs and placement locations. In 2001, the county erected 43 sets of signs in Monmouth's Panhandle Region through a grant from the Partnership for the Delaware Estuary.

As a complement to the project, the Planning Board has published a brochure on stream corridor protection. Part of the county's *Eco-Tips* series, the brochure educates citizens about the importance of healthy stream corridors and describes ways to reduce nonpoint source pollution and practice sound stewardship on their land. The series can be accessed via the Planning Board website at www.monmouthplanning.com. To obtain printed copies contact the Monmouth County Planning Board at 732-431-7460.

For more information on the NY/NJ Harbor Estuary Program go to www.harborestuary.org or contact Laura Bartovics at 212-637-3816.

South Branch Watershed Association Expands Waterways Stewardship Program

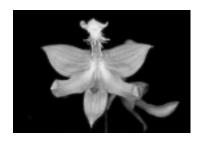
The South Branch Watershed Association has received a \$12,000 grant from the Geraldine R. Dodge Foundation for support of the Association's Waterways Stewardship Project. The Dodge grant will enable the Association to make improvements to the Waterways Stewardship Project by cross-referencing all Project parts with the current New Jersey Core Curriculum Content Standards, and expanding participation in the Project by bringing this important educational tool to more school districts, and students, in the watershed area. In doing so, the Association hopes to establish a legacy of effective environmental education by encouraging today's youth to examine, cherish and preserve our natural resources so that they may be passed on to future generations of environmental stewards.

The Waterways Stewardship Project provides in-class, in-field and computer based environmental education designed to foster students' appreciation for the natural world, from the tiniest "bug" that lives in the bottom of their neighborhood stream to the larger ecosystem supported by the watershed in which they live.

Recognizing the need to establish a human connection with the natural world, the program provides students with the very tangible and personal experience of discovering "hidden" aquatic life while conducting in-field observations and experiments, the results of which can be used to form a hypothesis in a real life science project directly related to the community in which they live. This experience, coupled with the knowledge gained during their in-class sessions, promotes a sense of stewardship for the environment and an appreciation of the ways that human behavior can positively or negatively impact natural systems.

The mission of the Geraldine R. Dodge Foundation, www.grdodge.org/, is to support and encourage those educational, cultural, social and environmental values that contribute to making our society more humane and our world more livable.

For more information, please visit SBWA's website at www.sbwa.org/ or contact Nicole Rahman, Program Director at 908-782-0422.



You do not need to be a school to garner the benefits of a rain garden. If you have room in your home landscaping consider adding a rain garden of your own.

Rain gardens are just what they sound like - gardens that soak up rain water from your roof, driveway and lawn. They are landscaped areas planted with wildflowers and other native vegetation to replace areas of lawn. The gardens fill with a few inches of water and allow the water to slowly filter into the ground rather than running off to storm drains. Rain gardens can allow as much as 30% more water to soak into the garden compared to a typical lawn. Holding back runoff also helps prevent pollution such as fertilizers from washing off your yard and into local streams or lakes.



The Native Plant Society of New Jersey to Help Schools Go Wild

by Daniel DiLollo, Native Plant Society of New Jersey

Have you ever noticed those places on the lawn where rainwater pools up after a storm event? Those are the perfect places for "rain gardens" - herbaceous and woody plantings set in a natural or man-made depression that help to soak up and purify water that would otherwise run off the property carrying with it pesticides, herbicides, animal waste, oils and other nonpoint source pollutants.

The Native Plant Society of New Jersey (NPSNJ) is launching a new program to promote native rain gardens on public school campuses across the state - places that typically have lots of turf grass, lots of stormwater runoff (from parking lots and rooftops) and lots of potential to help students learn about watershed functions!

Through a generous grant from the Watershed Institute at Stony Brook Millstone Watershed Association, NPSNJ will be able to introduce public school students to the concepts of watersheds via on-campus rain gardens. Funding from this grant will allow the Society to print a teacher's guidebook to developing native plant rain gardens. It will also help NPSNJ members to promote the rain garden program at educational workshops and teacher conferences as well as support the organization as it grows.

The Society will be providing guidance and technical resources directly to teachers who participate in the rain garden program. They will discover the rich cross-curricular connections that can be made with a garden. Site selection makes earth science come alive as students figure our exposure, amount of sun, and the annual rainfall of their area.

Chemistry will be explored in soil pH while biology and environmental science are used in determining growing zones, matching types of plants to growing conditions, planting and caring for plants.

In keeping with its mission, NPSNJ will be promoting the use of native plants in each of these projects, as they are adapted to the unique conditions of our NJ climate, soils and fauna making them low-maintenance, tolerant of weather conditions and often of great habitat value. The watershed functions served by a rain garden will also be emphasized, such as cleaning polluted runoff, slowing the rate of stream flooding and helping to replenish groundwater. All of this, while providing an aesthetic improvement to the landscape at the same time!

To help launch the rain gardens program, NPSNJ is also partnering with the NJDEP's Division of Fish and Wildlife, the state office that facilitates the "WILD School Sites" program. The goal of this program is to assist learners of any age in developing awareness, knowledge, skills, and commitment to result in informed decisions, responsible behavior and constructive actions concerning wildlife and the environment upon which life depends.

Linking up with the WILD School Sites program broadens the scope of the rain garden program. As Bob Swain, Vice President of the Native Plant Society, put it, "partnering with such a well-established program helps us to drive home the 'big ideas' that come with the rain garden projects, reinforcing the benefits of water quality, wildlife and the overall health of our environment."

NPSNJ is a non-profit statewide membership organization founded for the appreciation, protection, and study of the native flora of New Jersey. For more information about the Society or if you are a teacher and would like to build a rain garden with your students, please contact Bill Young at 732-928-0600 or TDCAKF@optonline.net or visit www.npsnj.org

Remembering Jack Stewart

by Kerry Kirk Pflugh, NJ Department of Environmental Protection, Division of Watershed Management Lynette Lurig, NJ Department of Environmental Protection, Division of Science, Research and Technology Miriam Dunne, NJ Department of Environmental Protection, Division of Fish and Wildlife

Starting a program from scratch is an experience not many of us have the opportunity to know. This has been our joy in establishing the Harbor Estuary/Urban Fishing Program. The idea for "taking kids fishing" to teach the public about state fish consumption advisories came from a group of citizens in the City of Elizabeth. Making it happen resulted from dedicated DEP staff, terrific community partners, but most especially, loyal and hard working Wildlife Corps volunteers from the Division of Fish and Wildlife.

This past summer, the Urban Fishing Program lost one of it's volunteers, Jack Stewart. Jack was a one of a kind -tall, strong, full of opinions, great sense of humor, an outdoors man, and best of all for us – a great angler. When he learned about this new program, he eagerly signed on. And from that moment until he became too ill to participate, Jack never missed an urban fishing program.

Jack Stewart was a member of the Wildlife Corps since 1988, primarily as a volunteer fishing education instructor at the Pequest Trout Hatchery and Natural Resource Education Center in Oxford. He also was a constant fixture at the Fish and Wildlife display booth at sportsmen's shows.

Jack was born and raised in a New York City neighborhood that encouraged its young men in hunting and fishing. He was introduced to hunting by neighborhood mentors, and regularly traveled with a group to Roscoe, New York to hunt deer and small game. Jack's grandparents had a summer house in Milton, New Jersey, where he acquired skills and a love for freshwater fishing. After serving as a marine in World War II and a career in New York City, he retired in 1986 and came to "work" for Fish and Wildlife shortly thereafter.

He very willingly shared his vast knowledge and experiences about fish, fishing and fishing equipment. We can honestly say, we never knew that there was so much to know about bait, lures, set-ups, weights, bobbers, lines, rods and reels. We also never realized how much prep time was needed to get equipment ready for a program, and how much was involved in cleaning it up after. Jack taught us that too, and took care of all of it.

Jack taught us something about respect and reliability. He showed up for every program, on time, even early, no matter where it was held or in what kind of weather. Often, Jack spent the whole day behind the van fixing the childrens' fishing lines/rigs.

Jack also knew how to make us laugh - a welcome gift when things get a little hectic and we all begin to take ourselves too seriously. We can still remember the way he would twitch his ear and flash that devilish smile - just when you needed it most.

As the years passed and Jack's health began to decline, he was still determined to help us. No matter how poorly he felt, he loved being out fishing with us more. We could always count on Jack. Without him, there would not have been an Urban Fishing Program.

This Spring, for the first time since 1996, we didn't hear from Jack and learned he was ill. Then the news we had dreaded hearing came. On July 18, 2004, our dear friend John F (Jack) Stewart passed away. He is survived by his wife Buth and their two daughters: five grandchildren

friend John F. (Jack) Stewart passed away. He is survived by his wife Ruth and their two daughters; five grandchildren and five great-grandchildren, and countless young people in the Newark Bay Complex and those of us in the Harbor Estuary/Urban Fishing program who loved him.

Mark Your Calendars for the 2nd Annual Watershed Educators Conference Coming in June 20051

"Making the Watershed Connection - An Interactive Conference for New Jersey Educators" will be held on Tuesday, June 28 and Wednesday, June 29, 2005 at the Rutgers EcoComplex in Burlington County. The Watershed Partnership for New Jersey and the New Jersey Department of Environmental Protection invites you to its second two-day interactive conference for educators. Sessions will explore New Jersey's dynamic watersheds and connect educators with regional resources, curriculum materials and more. Field trips on the second day will allow you to discover the beauty and complexities of your watershed and more ways to teach our future leaders about earth's most precious resource – water. Professional development credits are available. For more information, visit www.wpnj.org or www.nj.gov/dep/watershedmgt.

